

WE CLAIM:

1. An expression system comprising:
at least one SXR response element operably linked to at least one gene, and
a nuclear receptor which responds to xenobiotic compounds.
2. The expression system of claim 1, wherein said nuclear receptor is a steroid xenobiotic receptor.
3. The expression system of claim 1, wherein said nuclear receptor is a pregnane X receptor.
4. The expression system of claim 1, wherein said gene encodes a cytokine, a hormone, a blood component, therapeutic gene, or a toxic protein
5. The expression system of claim 1, wherein said xenobiotic compound is digitoxin, indomethacin, pregnelone-16-carbonitrile (PCN), tamoxifen, ralozifene, vitamin K, nifedipine, a barbituate or a steroid
6. An expression system comprising:
at least one SXR response element operably linked to at least one gene, and
an expression vector comprising nucleic acid encoding a receptor which responds to xenobiotic compounds.
7. The expression system of claim 6, wherein said nucleic acid encodes a steroid xenobiotic receptor.
8. The expression system of claim 6, wherein said nucleic acid encodes a pregnane X receptor.
9. The expression system of claim 6, wherein said expression vector constitutively expresses said nucleic acid.

10. The expression system of claim 6, wherein said expression vector inducibly expresses said nucleic acid.

5 11. A method for the production of a target protein in a cell, said method comprising administering to a cell at least one xenobiotic compound,

wherein said cell contains:

a nucleic acid comprising at least one SXR response
element operably linked to at least one gene encoding said target
protein, and

a receptor which responds to xenobiotic compounds.

12. The method of claim 11, wherein said receptor is a steroid xenobiotic receptor.

15 13. The method of claim 11, wherein said receptor is a pregnane X receptor.

14. The method of claim 11, wherein said xenobiotic compound is digitoxin, indomethacin, pregnelone-16-carbonitrile (PCN), tamoxifen, ralozifene, vitamin K, nifedipine, a barbituate or a steroid.

20 15. The method of claim 11, wherein said receptor is provided by expression from a nucleic acid construct encoding same.

25 16. A method for the production of a target protein in a cell, said method comprising administering to a cell at least one xenobiotic compound and a nucleic acid comprising an SXR response element operably linked to at least one gene encoding said target protein,
wherein said cell contains a receptor which responds to xenobiotic compounds.

17. The method of claim 16, wherein said receptor is a steroid xenobiotic receptor.

30 18. The method of claim 16, wherein said receptor is a pregnane X receptor.

19. The method of claim 16, wherein said xenobiotic compound is digitoxin, indomethacin, pregnelone-16-carbonitrile (PCN), tamoxifen, ralozifene, vitamin K, nifedipine, a barbituate or a steroid.

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20. The method of claim 16, wherein said receptor is provided by expression from a nucleic acid construct encoding same.

21. A method for the production of a target protein in a cell, said method comprising administering to a cell at least one xenobiotic compound, and a receptor which responds to xenobiotic compounds,

wherein said cell contains a nucleic acid comprising an SXR response element operably linked to at least one gene encoding said target protein.

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22. The method of claim 21, wherein said receptor is a steroid xenobiotic receptor.

23. The method of claim 21, wherein said receptor is a pregnane X receptor.

24. A method for the production of a target protein in a cell, said method comprising inducing synthesis in said cell of a receptor which responds to xenobiotic compounds, wherein said cell contains:

an expression vector comprising nucleic acid encoding said
receptor operatively associated with an inducible promoter,
a nucleic acid comprising an SXR response element
operably linked to at least one gene encoding said target protein,
and
at least one xenobiotic compound.

25. The method of claim 24, wherein said receptor is a steroid xenobiotic receptor.

26. The method of claim 24, wherein said receptor is a pregnane X receptor.